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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,662	08/31/2000	Jurgen Kockmann	P00 0316	2130
29177	7590	01/09/2006		EXAMINER
BELL, BOYD & LLOYD, LLC				HOANG, THAI D
P. O. BOX 1135			ART UNIT	PAPER NUMBER
CHICAGO, IL 60690-1135			2668	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	QCA
	09/485,662 <b>Examiner</b> Thai D. Hoang	KOCKMANN ET AL. <b>Art Unit</b> 2668	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11 October 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 13-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 13-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-16, 21 and 23-24 are rejected under 35 U.S.C. 102(b) as being unpatentable over Ito et al, US Patent No. 5,278,835, hereafter referred to as Ito.

Regarding claims 13 and 21, Ito discloses a TDMA Mobile radio communication system, which comprises:

A mobile radio communication system includes a plurality of base stations and a plurality of mobile stations respectively connected to the base stations through radio channels. At least either of the base and mobile stations includes a use state determining means for determining the use states of each of the radio frequencies and each of the time slots on the basis of a received wave, a radio channel determining means and a radio channel establishing means. In addition, Ito discloses the system is characterized in that in determination of a radio channel, if the use state determining means determines that a currently used time slot is present in one time frame, the position of a time slot to be used next is determined with reference to the position of the currently used time slot; col. 2, lines 25-51. Ito discloses the steps for logging on a mobile station (PSS) at a base station (BSS) for transmission of data: The base station transmits the data in time slots (TS1-TS6) wherein each time slot includes a control

signal (SACCH); see fig. 4; col. 6, lines 22-43. A use state determining means of the PSS receives waves transmitted from a corresponding one of the base stations BSS<sub>1</sub> to BSS<sub>n</sub> in units of radio frequencies and determines the presence/absence of a free time slot on the basis of the reception field strength of each wave. A speech channel selecting means of the PSS selects a proper time slot number from the free time slot numbers, and a speech channel establish control means of the PSS transmits the free time slot selected by the speech channel selecting means to the corresponding base station to establish a speech channel using this free time slot between the mobile station and the base station; fig. 5A; col. 7, lines 44-64.

Regarding claim 14, Ito discloses the BSS transmits the control signal (SACCH) in each time slot during the PSS log on to the BSS; fig. 4; col. 6, lines 22-43.

Regarding claims 15 and 23, Ito discloses the system operates in a time frame that comprises six time slots (TS<sub>1</sub>-TS<sub>6</sub>). The speech channel selecting means of the PSS selects a proper time slot number from the free time slot numbers, and a speech channel establish control means of the PSS transmits the free time slot selected by the speech channel selecting means to the corresponding base station to establish a speech channel using this free time slot between the mobile station and the base station; fig. 5A; col. 7, lines 44-64.

Regarding claims 16 and 24, the timeslots of a time frame in the system disclosed by Ito are inherently determined by an algorithm because the system operates based on a TDMA method.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17-18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito as shown above.

Regarding claim 17, as best understood, Ito does not disclose the PSS senses and passes over an interference frequency. However, ignoring an interference frequency is well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to pass over the interference frequency in order to improve quality of service.

Regarding claims 18 and 25, Ito does not disclose the system uses the ISM (Industrial Scientific Medical) band. However, the ISM band is well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ISM band for expanding the market, since it could be adapted with short-range wireless standard.

Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito as shown above, in view of FCC rule, title 47—Telecommunication, Chapter I: Federal Communications Commission (FCC), Part 15--Radio Frequency Devices ([http://www.access.gpo.gov/nara/cfr/waisidx\\_02/47cfr15\\_02.html](http://www.access.gpo.gov/nara/cfr/waisidx_02/47cfr15_02.html).), hereafter referred to as Miyake and FCC respectively.

Regarding claims 19-20, Ito does not disclose the system operates with at least 75 carrier frequencies and in particular 96 carrier frequencies. However, these frequencies band are suggested by The Federal Communications Commission (FCC) rule under part 15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the FCC rule into the system in order to adapt with conventional wireless devices which use ISM frequencies band in the market and to avoid an interference with other wireless devices.

Claim 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito as shown above, in view of Slegers, US Patent No. 5,892,794 A.

Regarding claim 22, Ito discloses the BSS transmits the control signal (SACCH) in each time slot during the PSS log on to the BSS; fig. 4; col. 6, lines 22-43. Ito does not disclose the system comprises a switch for switching between a logging on mode and a transmission mode. However, Slegers discloses a digital communication system in which a base station can switch from a first mode (voice mode) to a second mode (non-voice mode) and vice versa; col. 1, line 61 – col. 2, line 9, col.7, line 5-12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the switching concept disclosed by Slegers into Ito's the system in order to save bandwidth of the system.

#### ***Response to Arguments***

Applicant's arguments filed 10/11/2005 have been fully considered but they are not persuasive.

Page 6 of the remarks, Applicants argue, "Ito does not teach or suggest the feature of broadcasting check data, via the fixed station, which indicates a position of a carrier frequency of a current time slot in a predetermined sequence as recited in claims 13 and 21." Examiner respectfully disagrees. First, Applicants are requested to review the concept of the TDMA, wherein each TDMA time frame comprises a plurality of time slots. The signal is transmitted in each timeslot by a predetermined radio frequency channel. Secondly, Applicants are directed to column 2, lines 25-51, wherein the reference discloses:

"At least either of the base and mobile stations includes a use state determining means for determining the use states of each of the radio frequencies and each of the time slots on the basis of a received wave, a radio channel determining means and a radio channel establishing means."

and

"The system is characterized in that in determination of a radio channel, if the use state determining means determines that a currently used time slot is present in one time frame, the position of a time slot to be used next is determined with reference to the position of the currently used time slot..."

It indicates that the Base station in the system disclosed by Ito broadcasts a signal for determining the currently used time slot in predetermined sequence frequencies of the TDMA frame.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D. Hoang whose telephone number is The Examiner can normally be reached on Monday-Friday 10:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang

  
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1/6/06